

SILICON CARBIDE-BASED THERMAL SPRAY POWDER, METHOD OF PREPARATION AND USE

ABSTRACT

A silicon carbide-based thermal spray powder contains at least one boride chosen from zirconium boride, titanium boride and hafnium boride. The powder is prepared by mixing and aggregation of powders containing the compounds in question. Said thermal spray powder is used to deposit, via the plasma spraying technique, a silicon carbide-based coating on a metallic or non-metallic substrate. The figure shows the X-ray crystallogram obtained, for a silicon carbide-based powder, according to the invention, after thermal spraying. The substantial identity of this crystallogram with the one obtained prior to thermal spraying demonstrates that the silicon carbide has been deposited on the substrate without decomposing.